



SEQUENCE LISTING

6 att
09/724254
RECEIVED

JAN 22 2002

TECH CENTER 1600/2900

<110> RICCARDO DALLA-FAVERA

<120> ISOLATION OF FIVE NOVEL GENES CODING FOR NEW Fc RECEPTORS-TYPE
MOLECULES INVOLVED IN THE PATHOGENESIS OF LYMPHOMA/MELANOMA

<130> 0575/58044-A/JPW/AJM

<140> 09/724,254

<141> 2000-11-28

<160> 55

<170> PatentIn version 3.0

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<211> 90

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<213> unknown

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<212> DNA

<213> Human

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35 40 45

Phe Gln Phe Tyr Ala Thr Glu Lys Thr Thr Trp Tyr His Arg His Tyr
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Trp Gly Glu Lys Leu Thr Leu Thr Pro Gly Asn Thr Leu Glu Val Arg
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Glu Ser Gly Leu Tyr Arg Cys Gln Ala Arg Gly Ser Pro Arg Ser Asn
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Pro Val Arg Leu Leu Phe Ser Ser Asp Ser Leu Ile Leu Gln Ala Pro
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Tyr Ser Val Phe Glu Gly Asp Thr Leu Val Leu Arg Cys His Arg Arg
115 120 125

Arg Lys Glu Lys Leu Thr Ala Val Lys Tyr Thr Trp Asn Gly Asn Ile
130 135 140

Leu Ser Ile Ser Asn Lys Ser Trp Asp Leu Leu Ile Pro Gln Ala Ser
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Ser Asn Asn Asn Gly Asn Tyr Arg Cys Ile Gly Tyr Gly Asp Glu Asn
165 170 175

Asp Val Phe Arg Ser Asn Phe Lys Ile Ile Lys Ile Gln Glu Leu Phe
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Pro His Pro Glu Leu Xaa Ala Thr Asp Ser Gln Pro Thr Glu Gly Asn
195 200 205

Ser Val Asn Leu Ser Cys Glu Thr Gln Leu Pro Pro Glu Arg Ser Asp
210 215 220

Thr Pro Leu His Phe Asn Phe Phe Arg Asp Gly Glu Val Ile Leu Ser
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Asp Trp Ser Thr Tyr Pro Glu Leu Gln Leu Pro Thr Val Trp Arg Glu
245 250 255

Asn Ser Gly Ser Tyr Trp Cys Gly Ala Glu Thr Val Arg Gly Asn Ile
260 265 270

His Lys His Ser Pro Ser Leu Gln Ile His Val Gln Arg Ile Pro Val
275 280 285

Ser Gly Val Leu Leu Glu Thr Gln Pro Ser Gly Gly Gln Ala Val Glu
290 295 300

Gly Glu Met Leu Val Leu Val Cys Ser Val Ala Glu Gly Thr Gly Asp
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Thr Thr Phe Ser Trp His Arg Glu Asp Met Gln Glu Ser Leu Gly Arg
325 330 335

Lys Thr Gln Arg Ser Leu Arg Ala Glu Leu Glu Leu Pro Ala Ile Arg
340 345 350

Gln Ser His Ala Gly Gly Tyr Tyr Cys Thr Ala Asp Asn Ser Tyr Gly
355 360 365

Pro Val Gln Ser Met Val Leu Asn Val Thr Val Arg Glu Thr Pro Gly
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Asn Arg Asp Gly Leu Val Ala Ala Gly Ala Thr Gly Gly Leu Leu Ser
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Ala Leu Ile Leu Ala Val Ala Leu Leu Phe His Cys Trp Arg Arg Arg
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Lys Ser Gly Val Gly Phe Leu Gly Asp Glu Thr Arg Leu Pro Pro Ala
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Pro Gly Pro Gly Glu Ser Ser His Ser Ile Cys Pro Ala Gln Val Glu
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Leu Gln Ser Leu Tyr Val Asp Val His Pro Lys Lys Gly Asp Leu Val
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Tyr Ser Glu Ile Gln Thr Thr Gln Leu Gly Glu Glu Glu Glu Ala Asn
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Thr Ser Arg Thr Leu Leu Glu Asp Lys Asp Val Ser Val Val Tyr Ser
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Xaa Asp Glu Glu Ser
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<213> human

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Ile Leu Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly
50 55 60

Ser Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Ala Ser Leu
65 70 75 80

Ile Leu Gln Ala Pro Leu Ser Val Phe Glu Gly Asp Ser Val Val Leu
85 90 95

Arg Cys Arg Ala Lys Ala Glu Val Thr Leu Asn Asn Thr Ile Tyr Lys
100 105 110

Asn Asp Asn Val Leu Ala Phe Leu Asn Lys Arg Thr Asp Phe His Ile
115 120 125

Pro His Ala Cys Leu Lys Asp Asn Gly Ala Tyr Arg Cys Thr Gly Tyr
130 135 140

Lys Glu Ser Cys Cys Pro Val Ser Ser Asn Thr Val Lys Ile Gln Val
145 150 155 160

Gln Glu Pro Phe Thr Arg Pro Val Leu Arg Ala Ser Ser Phe Gln Pro
165 170 175

Ile Ser Gly Asn Pro Val Thr Thr Cys Glu Thr Gln Leu Ser Leu Glu
180 185 190

Arg Ser Asp Val Pro Leu Arg Phe Arg Phe Phe Arg Asp Asp Gln Thr
195 200 205

Leu Gly Leu Gly Trp Ser Leu Ser Pro Asn Phe Gln Ile Thr Ala Met
210 215 220

Trp Ser Lys Asp Ser Gly Phe Tyr Trp Cys Lys Ala Ala Thr Met Pro
225 230 235 240

His Ser Val Ile Ser Asp Ser Pro Arg Ser Trp Ile Gln Val Gln Ile
245 250 255

Pro Ala Ser His Pro Val Leu Thr Leu Ser Pro Glu Lys Ala Leu Asn
260 265 270

Phe Glu Gly Thr Lys Val Thr Leu His Cys Glu Thr Gln Glu Asp Ser
275 280 285

Leu Arg Thr Leu Tyr Arg Phe Tyr His Glu Gly Val Pro Leu Arg His
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Lys Ser Val Arg Cys Glu Arg Gly Ala Ser Ile Ser Phe Ser Leu Thr
305 310 315 320

Thr Glu Asn Ser Gly Asn Tyr Tyr Cys Thr Ala Asp Asn Gly Leu Gly
325 330 335

Ala Lys Pro Ser Lys Ala Ser Leu Ser Val Thr Val Pro Val Ser His
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Pro Val Leu Asn Leu Ser Ser Pro Glu Asp Leu Ile Phe Glu Gly Ala
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Tyr Gln Phe His His Glu Asp Ala Ala Leu Glu Arg Arg Ser Ala Asn
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Ser Ala Gly Gly Val Ala Ile Ser Phe Ser Leu Thr Ala Glu His Ser
405 410 415

Gly Asn Tyr Tyr Cys Ala Asp Asn Gly Phe Gly Pro Gln Arg Ser Lys
420 425 430

Ala Val Ser Leu Ser Ile Thr Val Pro Val Ser His Pro Val Leu Thr
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Leu Ser Ser Ala Glu Ala Leu Thr Phe Glu Gly Ala Thr Val Thr Leu
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His Cys Glu Val Gln Arg Gly Ser Pro Gln Ile Leu Tyr Gln Phe Tyr
465 470 475 480

His Glu Asp Met Pro Leu Trp Ser Ser Ser Thr Pro Ser Val Gly Arg
485 490 495

Val Ser Phe Ser Ser Leu Thr Glu Gly His Ser Gly Asn Tyr Tyr Cys
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Thr Ala Asp Asn Gly Phe Gly Pro Gln Arg Ser Glu Val Val Ser Leu
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Arg Ala Gln Ala Val Val Gly Asp Leu Leu Glu Leu His Cys Glu Ala
545 550 555 560

Pro Arg Gly Ser Pro Pro Ile Leu Tyr Trp Phe Tyr His Glu Asp Val
565 570 575

Thr Leu Gly Ser Ser Ala Pro Ser Gly Gly Glu Ala Ser Phe Asn Leu
580 585 590

Ser Leu Thr Ala Glu His Ser Gly Asn Tyr Ser Cys Glu Ala Asn Asn
595 600 605

Gly Leu Val Ala Gln His Ser Asp Thr Ile Ser Leu Ser Val Ile Val
610 615 620

Pro Val Ser Arg Pro Ile Leu Thr Phe Arg Ala Pro Arg Ala Gln Ala
625 630 635 640

Val Val Gly Asp Leu Leu Glu Leu His Cys Glu Ala Leu Arg Gly Ser
645 650 655

Ser Pro Leu Tyr Trp Phe Tyr His Glu Asp Val Thr Leu Gly Lys Ile
660 665 670

Ser Ala Pro Ser Gly Gly Gly Ala Ser Phe Asn Leu Ser Leu Thr Thr
675 680 685

Glu His Ser Gly Ile Tyr Ser Cys Glu Ala Asp Asn Gly Leu Glu Ala
690 695 700

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<212> PRT

<213> human

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Arg Phe Tyr Ser Lys Thr Lys Trp Tyr His Arg Tyr Leu Gly Lys Glu
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Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu Glu Val Gln Glu Ser Gly
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Glu Tyr Arg Cys Gln Ala Gln Gly Ser Pro Leu Ser Ser Pro Val His
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Phe Glu Gly Asp Ser Val Val Leu Arg Cys Arg Ala Lys Ala Glu Val
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Asn Lys Arg Thr Asp Phe His Ile Pro His Ala Cys Leu Lys Asp Asn
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Gly Ala Tyr Arg Cys Thr Gly Tyr Lys Glu Ser Cys Cys Pro Val Ser
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Ser Asn Thr Val Lys Ile Gln Val Gln Glu Pro Phe Thr Arg Pro Val
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Leu Arg Ala Ser Ser Phe Gln Pro Ile Ser Gly Asn Pro Val Thr Leu
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Thr Cys Glu Thr Gln Leu Ser Leu Glu Arg Ser Asp Val Pro Leu Arg
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Phe Arg Phe Phe Arg Asp Asp Gln Thr Leu Gly Leu Gly Trp Ser Leu
225 230 235 240

Ser Pro Asn Phe Gln Ile Thr Ala Met Trp Ser Lys Asp Ser Gly Phe
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Tyr Trp Cys Lys Ala Ala Thr Met Pro His Ser Val Ile Ser Asp Ser
260 265 270

Pro Arg Ser Trp Ile Gln Val Gln Ile Pro Ala Ser His Pro Val Leu
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Thr Leu Ser Pro Glu Lys Ala Leu Asn Phe Glu Gly Thr Lys Val Thr
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Leu His Cys Glu Thr Gln Glu Asp Ser Leu Arg Thr Leu Tyr Arg Phe
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Tyr His Glu Gly Val Pro Leu Arg His Lys Ser Val Arg Cys Glu Arg
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Gly Ala Ser Ile Ser Phe Ser Leu Thr Thr Glu Asn Ser Gly Asn Tyr
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Ser Leu Ser Val Thr Val Pro Val Ser His Pro Val Leu Asn Leu Ser
370 375 380

Ser Pro Glu Asp Leu Ile Phe Glu Gly Ala Lys Val Thr Leu His Cys
385 390 395 400

Glu Ala Gln Arg Gly Ser Leu Pro Ile Leu Tyr Gln Phe His His Glu
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Asp Ala Ala Leu Glu Arg Arg Ser Ala Asn Ser Ala Gly Gly Val Ala
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Ile Ser Phe Ser Leu Thr Ala Glu His Ser Gly Asn Tyr Tyr Cys Thr
435 440 445

Ala Asp Asn Gly Phe Gly Pro Gln Arg Ser Lys Ala Val Ser Leu Ser
450 455 460

Ile Thr Val Pro Val Ser His Pro Val Leu Thr Leu Ser Ser Ala Glu
465 470 475 480

Ala Leu Thr Phe Glu Gly Ala Thr Val Thr Leu His Cys Glu Val Gln
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Arg Gly Ser Pro Gln Ile Leu Tyr Gln Phe Tyr His Glu Asp Met Pro
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Leu Val Ser Ser Ser Thr Pro Ser Val Gly Arg Val Ser Phe Ser Phe
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Ser Leu Thr Glu Gly His Ser Gly Asn Tyr Tyr Cys Thr Ala Asp Asn
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Gly Phe Gly Pro Gln Arg Ser Glu Val Val Ser Leu Phe Val Thr Gly
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<211> 2957

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2957

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<211> 952

<212> PRT

<213> human

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Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys Gly Phe Arg
35 40 45

Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg Tyr Leu Gly Lys
50 55 60

Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu Glu Val Gln Glu Ser
65 70 75 80

Gly Ser Tyr Arg Cys Gln Ala Gln Gly Ser Pro Leu Ser Ser Pro Val
85 90 95

His Leu Asp Phe Ser Ser Ala Ser Leu Ile Leu Gln Ala Pro Leu Ser
100 105 110

Val Phe Glu Gly Asp Ser Val Val Leu Arg Cys Arg Ala Lys Ala Glu
115 120 125

Val Thr Leu Asn Asn Thr Ile Tyr Lys Asn Asp Asn Val Leu Ala Phe
130 135 140

Leu Asn Lys Arg Thr Asp Phe His Ile Pro His Ala Cys Leu Lys Asp

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Asn Gly Ala Tyr Arg Cys Thr Gly Tyr Lys Glu Ser Cys Cys Pro Val			
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Ser Ser Asn Thr Val Lys Ile Gln Val Gln Glu Pro Phe Thr Arg Pro			
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Val Leu Arg Ala Ser Ser Phe Gln Pro Ile Ser Gly Asn Pro Val Thr			
195	200	205	
Leu Thr Cys Glu Thr Gln Leu Ser Leu Glu Arg Ser Asp Val Pro Leu			
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Arg Phe Arg Phe Phe Arg Asp Asp Gln Thr Leu Gly Leu Gly Trp Ser			
225	230	235	240
Leu Ser Pro Asn Phe Gln Ile Thr Ala Met Trp Ser Lys Asp Ser Gly			
245	250	255	
Phe Tyr Trp Cys Lys Ala Ala Thr Met Pro His Ser Val Ile Ser Asp			
260	265	270	
Ser Pro Arg Ser Trp Ile Gln Val Gln Ile Pro Ala Ser His Pro Val			
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Leu Thr Leu Ser Pro Glu Lys Ala Leu Asn Phe Glu Gly Thr Lys Val			
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Thr Leu His Cys Glu Thr Gln Glu Asp Ser Leu Arg Thr Leu Tyr Arg			
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Phe Tyr His Glu Gly Val Pro Leu Arg His Lys Ser Val Arg Cys Glu			
325	330	335	
Arg Gly Ala Ser Ile Ser Phe Ser Leu Thr Thr Glu Asn Ser Gly Asn			
340	345	350	
Tyr Tyr Cys Thr Ala Asp Asn Gly Leu Gly Ala Lys Pro Ser Lys Ala			
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Val Ser Leu Ser Val Thr Val Pro Val Ser His Pro Val Leu Asn Leu			
370	375	380	
Ser Ser Pro Glu Asp Leu Ile Phe Glu Gly Ala Lys Val Thr Leu His			

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Cys Glu Ala Gln Arg Gly Ser Leu Pro Ile Leu Tyr Gln Phe His His			
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Leu Thr Glu Gly His Ser Gly Asn Tyr Tyr Cys Thr Ala Asp Asn Gly			
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Pro Ile Leu Thr Phe Arg Ala Pro Arg Ala Gln Ala Val Val Gly Asp			
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Trp Phe Tyr His Glu Asp Val Thr Leu Gly Lys Ile Ser Ala Pro Ser			
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Gly Gly Gly Ala Ser Phe Asn Leu Ser Leu Thr Thr Glu His Ser Gly			
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Ile Tyr Ser Cys Glu Ala Asp Asn Gly Leu Glu Ala Gln Arg Ser Glu			
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Met Val Thr Leu Lys Val Ala Val Pro Val Ser Arg Pro Val Leu Thr			
740	745	750	
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755	760	765	
Leu His Cys Glu Ala Leu Arg Gly Ser Pro Leu Ile Leu Tyr Arg Phe			
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Phe His Glu Asp Val Thr Leu Gly Asn Glu Leu His Cys Glu Ala Leu			
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Arg Gly Ser Pro Leu Ile Leu Tyr Arg Phe Phe His Glu Asp Val Thr			
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Leu Gly Asn Asn Gly Leu Gly Ala Gln Arg Ser Glu Thr Val Thr Leu			
820	825	830	
Tyr Ile Thr Gly Leu Thr Ala Asn Arg Ser Gly Pro Phe Ala Thr Gly			
835	840	845	
Val Ala Gly Gly Leu Leu Ser Ile Ala Gly Leu Ala Ala Gly Ala Leu			
850	855	860	
Leu Leu Tyr Cys Trp Leu Ser Arg Lys Ala Gly Arg Lys Pro Ala Ser			

865	870	875	880
Asp Pro Ala Arg Ser Pro Ser Asp Ser Asp Ser Gln Glu Pro Thr Tyr			
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His Met Val Pro Ala Trp Glu Glu Leu Gln Pro Val Tyr Thr Asn Ala			
	900	905	910
Asn Pro Arg Gly Glu Asn Val Val Tyr Ser Glu Val Arg Ile Ile Gln			
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Glu Lys Lys Lys His Ala Val Ala Ser Asp Pro Arg His Leu Arg Asn			
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<211> 2203

<212> DNA

<213> human

<400> 12

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<211> 22

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Ser Ser Ala Pro His Arg
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<211> 2499

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<212> PRT

<213> HUMAN

<400> 15

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Phe Tyr Ala Thr Glu Lys Thr Thr Trp Tyr His Arg His Tyr Trp Gly
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Glu Lys Leu Thr Leu Thr Pro Gly Asn Thr Leu Glu Val Arg Glu Ser
65 70 75 80

Gly Leu Tyr Arg Cys Gln Ala Arg Gly Ser Pro Arg Ser Asn Pro Val
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Arg Leu Leu Phe Ser Ser Asp Ser Leu Ile Leu Gln Ala Pro Tyr Ser
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Val Phe Glu Gly Asp Thr Leu Val Leu Arg Cys His Arg Arg Arg Lys
115 120 125

Glu Lys Leu Thr Ala Val Lys Tyr Thr Trp Asn Gly Ser Ile Ser Asn
130 135 140

Lys Ser Trp Asp Leu Leu Ile Pro Gln Ala Ser Ser Asn Asn Asn Gly
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Asn Tyr Arg Cys Ile Gly Tyr Gly Asp Glu Asn Asp Val Phe Arg Ser
165 170 175

Asn Phe Lys Ile Ile Lys Ile Gln Glu Leu Phe Pro His Pro Glu Leu
180 185 190

Lys Ala Thr Asp Ser Gln Pro Thr Glu Gly Asn Ser Val Cys Glu Thr
195 200 205

Gln Leu Pro Pro Glu Arg Ser Asp Thr Pro Leu His Phe Asn Phe Phe
210 215 220

Arg Asp Gly Glu Val Ile Leu Ser Asp Trp Ser Thr Tyr Pro Glu Leu
225 230 235 240

Gln Leu Pro Thr Val Trp Arg Glu Asn Ser Gly Ser Tyr Trp Cys Gly
245 250 255

Ala Glu Thr Val Arg Gly Asn Ile His Lys His Ser Pro Ser Leu Gln
260 265 270

Ile His Val Gln Arg Ile Pro Val Ser Gly Val Leu Leu Glu Thr Gln
275 280 285

Pro Ser Gly Gly Gln Ala Val Glu Gly Glu Met Leu Val Leu Val Cys
290 295 300

Ser Val Ala Glu Gly Thr Gly Asp Thr Thr Phe Ser Trp His Arg Glu
305 310 315 320

Asp Met Gln Glu Ser Leu Gly Arg Lys Thr Gln Arg Ser Leu Arg Ala
325 330 335

Glu Leu Glu Leu Pro Ala Ile Arg Gln Ser His Ala Gly Gly Tyr Tyr
340 345 350

Cys Thr Ala Asp Asn Ser Tyr Gly Pro Val Gln Ser Met Val Leu Val
355 360 365

Arg Glu Thr Pro Gly Asn Arg Asp Gly Leu Val Ala Ala Gly Ala Thr
370 375 380

Gly Gly Leu Leu Ser Ala Leu Leu Leu Ala Val Ala Leu Leu Phe His
385 390 395 400

Cys Trp Arg Arg Arg Lys Ser Gly Val Gly Phe Leu Gly Asp Glu Thr
405 410 415

Arg Leu Pro Pro Ala Pro Gly Pro Gly Glu Ser Ser His Ser Ile Cys
420 425 430

Pro Ala Val Glu Leu Gln Ser Leu Tyr Val Asp Val His Pro Lys Lys
435 440 445

Gly Asp Leu Val Tyr Ser Glu Ile Gln Thr Thr Gln Leu Gly Glu Glu
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Glu Glu Ala Asn Thr Ser Arg Thr Leu Leu Glu Asp Lys Asp Val Ser
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Val Val Tyr Ser Glu Val Lys Thr Gln His Pro Asp Asn Ser Ala Gly
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Lys Ile Ser Ser Lys Asp Glu Glu Ser
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<211> 2970

<212> DNA

<213> Human

<400> 16

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<211> 732

<212> PRT

<213> Human

<400> 17

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Thr Ala Phe Lys Gly Glu Lys Val Ala Leu Ile Cys Ser Ser Ile Ser
35 40 45

His Ser Leu Ala Gln Gly Asp Thr Tyr Trp Tyr His Asp Glu Lys Leu
50 55 60

Leu Lys Ile Lys His Asp Lys Ile Gln Ile Thr Glu Pro Gly Asn Tyr
65 70 75 80

Gln Cys Lys Thr Arg Gly Ser Ser Leu Ser Asp Ala Val His Val Glu
85 90 95

Phe Ser Pro Asp Trp Leu Ile Leu Gln Ala Leu His Pro Val Phe Glu
100 105 110

Gly Asp Asn Val Ile Leu Arg Cys Gln Gly Lys Asp Asn Lys Asn Thr
115 120 125

His Gln Lys Val Tyr Tyr Lys Asp Gly Lys Gln Leu Pro Asn Ser Tyr
130 135 140

Asn Leu Glu Lys Ile Thr Val Asn Ser Val Ser Arg Asp Asn Ser Lys
145 150 155 160

Tyr His Cys Thr Ala Tyr Arg Lys Phe Tyr Ile Leu Asp Ile Glu Val
165 170 175

Thr Ser Lys Pro Leu Asn Ile Gln Val Gln Glu Leu Phe Leu His Pro
180 185 190

Val Leu Arg Ala Ser Ser Ser Thr Pro Ile Glu Gly Ser Pro Met Thr
195 200 205

Leu Thr Cys Glu Thr Gln Leu Ser Pro Gln Arg Pro Asp Val Gln Leu
210 215 220

Gln Phe Ser Leu Phe Arg Asp Ser Gln Thr Leu Gly Leu Gly Trp Ser
225 230 235 240

Arg Ser Pro Arg Leu Gln Ile Pro Ala Met Trp Thr Glu Asp Ser Gly
245 250 255

Ser Tyr Trp Cys Glu Val Glu Thr Val Thr His Ser Ile Lys Lys Arg
260 265 270

Ser Leu Arg Ser Gln Ile Arg Val Gln Arg Val Pro Val Ser Asn Val
275 280 285

Asn Leu Glu Ile Arg Pro Thr Gly Gly Gln Leu Ile Glu Gly Glu Asn
290 295 300

Met Val Leu Ile Cys Ser Val Ala Gln Gly Ser Gly Thr Val Thr Phe
305 310 315 320

Ser Trp His Lys Glu Gly Arg Val Arg Ser Leu Gly Arg Lys Thr Gln
325 330 335

Arg Ser Leu Leu Ala Glu Leu His Val Leu Thr Val Lys Glu Ser Asp
340 345 350

Ala Gly Arg Tyr Tyr Cys Ala Ala Asp Asn Val His Ser Pro Ile Leu
355 360 365

Ser Thr Trp Ile Arg Val Thr Val Arg Ile Pro Val Ser His Pro Val
370 375 380

Leu Thr Phe Arg Ala Pro Arg Ala His Thr Val Val Gly Asp Leu Leu
385 390 395 400

Glu Leu His Cys Glu Ser Leu Arg Gly Ser Pro Pro Ile Leu Tyr Arg
405 410 415

Phe Tyr His Glu Asp Val Thr Leu Gly Asn Ser Ser Ala Pro Ser Gly
420 425 430

Gly Gly Ala Ser Phe Asn Leu Ser Leu Thr Ala Glu His Ser Gly Asn
435 440 445

Tyr Ser Cys Asp Ala Asp Asn Gly Leu Gly Ala Gln His Ser His Gly
450 455 460

Val Ser Leu Arg Val Thr Val Pro Val Ser Arg Pro Val Leu Thr Leu
465 470 475 480

Arg Ala Pro Gly Ala Gln Ala Val Val Gly Asp Leu Leu Glu Leu His
485 490 495

Cys Glu Ser Leu Arg Gly Ser Phe Pro Ile Leu Tyr Trp Phe Tyr His
500 505 510

Glu Asp Asp Thr Leu Gly Asn Ile Ser Ala His Ser Gly Gly Gly Ala
515 520 525

Ser Phe Asn Leu Ser Leu Thr Thr Glu His Ser Gly Asn Tyr Ser Cys
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Glu Ala Asp Leu Gly Ala Gln His Ser Lys Val Val Thr Leu Asn Val
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Thr Gly Thr Ser Arg Asn Arg Thr Gly Leu Thr Ala Ala Gly Ile Thr
565 570 575

Gly Leu Val Leu Ser Ile Leu Val Leu Ala Ala Ala Ala Leu Leu
580 585 590

His Tyr Ala Arg Ala Arg Arg Lys Pro Gly Gly Leu Ser Ala Thr Gly
595 600 605

Thr Ser Ser His Ser Pro Ser Glu Cys Gln Glu Pro Ser Ser Ser Arg
610 615 620

Pro Ser Arg Ile Asp Pro Gln Glu Pro Thr His Ser Lys Pro Leu Ala
625 630 635 640

Pro Met Glu Leu Glu Pro Met Tyr Ser Asn Val Asn Pro Gly Asp Ser
645 650 655

Asn Pro Ile Tyr Ser Gln Ile Trp Ser Ile Gln His Thr Lys Glu Asn
660 665 670

Ser Ala Asn Cys Pro Met Met His Gln Glu His Glu Glu Leu Thr Val
675 680 685

Leu Tyr Ser Glu Leu Lys Lys Thr His Pro Asp Asp Ser Ala Gly Glu
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Ala Ser Ser Arg Gly Arg Ala His Glu Glu Asp Asp Glu Glu Asn Tyr
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Glu Asn Val Pro Arg Val Leu Leu Ala Ser Asp His
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<211> 2529

<212> DNA

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<211> 507

<212> PRT

<213> human

<400> 19

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Ser Ile Val Leu Lys Cys Gln Gly Glu Gln Asn Trp Lys Ile Gln Lys
35 40 45

Met Ala Tyr His Lys Asp Asn Lys Glu Leu Ser Val Phe Lys Lys Phe
50 55 60

Ser Asp Phe Leu Ile Gln Ser Ala Val Leu Ser Asp Ser Gly Asn Tyr
65 70 75 80

Phe Cys Ser Thr Lys Gly Gln Leu Phe Leu Trp Asp Lys Thr Ser Asn
85 90 95

Ile Val Lys Ile Lys Val Gln Glu Leu Phe Gln Arg Pro Val Leu Thr
100 105 110

Ala Ser Ser Phe Gln Pro Ile Glu Gly Gly Pro Val Ser Leu Lys Cys
115 120 125

Glu Thr Arg Leu Ser Pro Gln Arg Leu Asp Val Gln Leu Gln Phe Cys
130 135 140

Phe Phe Arg Glu Asn Gln Val Leu Gly Ser Gly Trp Ser Ser Ser Pro
145 150 155 160

Glu Leu Gln Ile Ser Ala Val Trp Ser Glu Asp Thr Gly Ser Tyr Trp
165 170 175

Cys Lys Ala Glu Thr Val Thr His Arg Ile Arg Lys Gln Ser Leu Gln
180 185 190

Ser Gln Ile His Val Gln Arg Ile Pro Ile Ser Asn Val Ser Leu Glu
195 200 205

Ile Arg Ala Pro Gly Gly Gln Val Thr Glu Gly Gln Lys Leu Leu Leu
210 215 220

Cys Ser Val Ala Gly Gly Thr Gly Asn Val Thr Phe Ser Trp Tyr Arg
225 230 235 240

Glu Ala Thr Gly Thr Ser Met Gly Lys Lys Thr Gln Arg Ser Leu Ser
245 250 255

Arg Glu Ala Thr Gly Thr Ser Met Gly Lys Lys Thr Gln Arg Ser Leu
260 265 270

Ser Cys Arg Ala Asp Asn Gly His Val Pro Ile Gln Ser Lys Val Val
275 280 285

Asn Ile Pro Val Arg Ile Pro Val Ser Arg Pro Val Leu Thr Leu Arg
290 295 300

Ser Pro Gly Ala Gln Ala Ala Val Gly Asp Leu Leu Glu Leu His Cys
305 310 315 320

Glu Ala Leu Arg Gly Ser Pro Pro Ile Leu Tyr Gln Phe Tyr His Glu
325 330 335

Asp Val Thr Leu Gly Asn Ser Ser Ala Pro Ser Gly Gly Gly Ala Ser
340 345 350

Phe Asn Leu Ser Leu Thr Ala Glu His Ser Gly Asn Tyr Ser Cys Glu
355 360 365

Ala Asn Asn Gly Leu Gly Ala Gln Cys Ser Glu Ala Val Pro Val Ser
370 375 380

Ile Ser Gly Pro Asp Gly Tyr Arg Arg Asp Leu Met Thr Ala Gly Val
385 390 395 400

Leu Trp Gly Leu Phe Gly Val Leu Gly Phe Thr Gly Val Ala Leu Leu
405 410 415

Leu Tyr Ala Leu Phe His Lys Ile Ser Gly Phe Thr Gly Val Ala Leu
420 425 430

Leu Leu Tyr Ala Leu Phe His Lys Ile Ser Gly Glu Phe Thr Tyr Ser
435 440 445

Ser Pro Thr Pro Asp Met Glu Glu Leu Gln Pro Val Tyr Val Asn Val
450 455 460

Gly Ser Val Asp Val Asp Val Val Tyr Ser Gln Val Trp Ser Met Gln
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Ser Gln Val Ile Tyr Ser Ser Val Lys Lys Ser
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<211> 2303

<212> DNA

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<400> 20

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<211> 429

<212> PRT

<213> human

<400> 21

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	50			55				60							
Trp	Ser	Ser	Ser	Pro	Lys	Leu	Gln	Ile	Ala	Ala	Met	Trp	Lys	Glu	Asp
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Thr Gly Ser Tyr Trp Cys Glu Ala Gln Thr Met Ala Ser Lys Val Leu
85 90 95

Arg Ser Arg Arg Ser Gln Ile Asn Val His Arg Val Pro Val Ala Asp
100 105 110

Val Ser Leu Glu Thr Gln Pro Pro Gly Gly Gln Val Met Glu Gly Asp
115 120 125

Arg Leu Val Leu Ile Cys Ser Val Ala Met Gly Thr Gly Asp Ile Thr
130 135 140

Phe Leu Trp Tyr Lys Gly Ala Val Gly Leu Asn Leu Gln Ser Lys Thr
145 150 155 160

Gln Arg Ser Leu Thr Ala Glu Tyr Glu Ile Pro Ser Val Arg Glu Ser
165 170 175

Asp Ala Glu Gln Tyr Tyr Cys Val Ala Glu Asn Gly Tyr Gly Pro Ser
180 185 190

Pro Ser Gly Leu Val Ser Ile Thr Val Arg Ile Pro Val Ser Arg Pro
195 200 205

Ile Leu Met Leu Arg Ala Pro Arg Ala Gln Ala Ala Val Glu Asp Val
210 215 220

Leu Glu Leu His Cys Glu Ala Leu Arg Gly Ser Pro Pro Ile Leu Tyr
225 230 235 240

Trp Phe Tyr His Glu Asp Ile Thr Leu Gly Ser Arg Ser Ala Pro Ser
245 250 255

Gly Gly Gly Ala Ser Phe Asn Leu Ser Leu Thr Glu Glu His Ser Gly
260 265 270

Asn Tyr Ser Cys Glu Ala Asn Asn Gly Leu Gly Ala Gln Arg Ser Glu
275 280 285

Ala Val Thr Leu Asn Phe Thr Val Pro Thr Gly Ala Arg Ser Asn His
290 295 300

Leu Thr Ser Gly Val Ile Glu Gly Leu Leu Ser Thr Leu Gly Pro Ala
305 310 315 320

Thr Val Ala Leu Leu Phe Cys Tyr Gly Leu Lys Arg Lys Ile Gly Arg
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Arg Ser Ala Arg Asp Pro Leu Arg Ser Leu Pro Ser Pro Leu Pro Gln
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Tyr Glu Asn Val Asn Val Val Ser Gly Asp Glu Val Tyr Ser Leu Ala
370 375 380

Tyr Tyr Asn Gln Pro Glu Gln Glu Ser Val Ala Ala Glu Thr Leu Gly
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<210> 29

<211> 877

<212> PRT

<213> HUMAN

<400> 29

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Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro Trp
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Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys Gly Phe
35 40 45

Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg Tyr Leu Gly
50 55 60

Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu Glu Val Gln Glu
65 70 75 80

Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser Pro Leu Ser Ser Pro
85 90 95

Val His Leu Asp Phe Ser Ser Ala Ser Leu Ile Leu Gln Ala Pro Leu
100 105 110

Ser Val Phe Glu Gly Asp Ser Val Val Leu Arg Cys Arg Ala Lys Ala
115 120 125

Glu Val Thr Leu Ile Tyr Lys Asn Asp Asn Val Leu Ala Phe Leu Asn
130 135 140

Lys Arg Thr Asp Phe His Ile Pro His Ala Cys Leu Lys Asp Asn Gly
145 150 155 160

Ala Tyr Arg Cys Thr Gly Tyr Lys Glu Ser Cys Cys Pro Val Ser Ser
165 170 175

Asn Thr Val Lys Ile Gln Val Gln Glu Pro Phe Thr Arg Pro Val Leu
180 185 190

Arg Ala Ser Ser Phe Gln Pro Ile Ser Gly Asn Pro Val Thr Leu Thr
195 200 205

Cys Glu Thr Gln Leu Ser Leu Glu Arg Ser Asp Val Pro Leu Arg Phe
210 215 220

Arg Phe Phe Arg Asp Asp Gln Thr Leu Gly Leu Gly Trp Ser Leu Ser
225 230 235 240

Pro Asn Phe Gln Ile Thr Ala Met Trp Ser Lys Asp Ser Gly Phe Tyr
245 250 255

Trp Cys Lys Ala Thr Met Pro His Ser Val Ile Ser Asp Ser Pro Arg
260 265 270

Ser Trp Ile Gln Val Gln Ile Pro Ala Ser His Pro Val Leu Thr Leu
275 280 285

Ser Pro Glu Lys Ala Leu Asn Phe Glu Gly Thr Lys Val Thr Leu His
290 295 300

Cys Glu Thr Gln Glu Asp Ser Leu Arg Thr Leu Tyr Arg Phe Tyr His
305 310 315 320

Glu Gly Val Pro Leu Arg His Lys Ser Val Arg Cys Glu Arg Gly Ala
325 330 335

Ser Ile Ser Phe Ser Leu Thr Thr Glu Asn Ser Gly Asn Tyr Tyr Cys
340 345 350

Thr Ala Asp Asn Gly Leu Gly Ala Lys Pro Ser Lys Ala Val Ser Leu
355 360 365

Ser Val Thr Val Pro Val Ser His Pro Val Leu Ser Pro Glu Asp Leu
370 375 380

Ile Phe Glu Gly Ala Lys Val Thr Leu His Cys Glu Ala Gln Arg Gly
385 390 395 400

Ser Leu Pro Ile Leu Tyr Gln Phe His His Glu Asp Ala Ala Leu Glu
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Arg Arg Ser Ala Asn Ser Ala Gly Gly Val Ala Ile Ser Phe Ser Leu
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Thr Ala Glu His Ser Gly Asn Tyr Tyr Cys Thr Ala Asp Asn Gly Phe
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Gly Pro Gln Arg Ser Lys Ala Val Ser Leu Ser Ile Thr Val Pro Val
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Gly Ala Thr Val Thr Leu His Cys Glu Val Gln Arg Gly Ser Pro Gln
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Ile Leu Tyr Gln Phe Tyr His Glu Asp Met Pro Leu Trp Ser Ser Ser
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Thr Pro Ser Val Gly Arg Val Ser Phe Ser Phe Ser Leu Thr Glu Gly
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His Ser Gly Asn Tyr Tyr Cys Thr Ala Asp Asn Gly Phe Gly Pro Gln
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Arg Ser Glu Val Val Ser Leu Phe Val Thr Val Pro Val Ser Arg Pro
545 550 555 560

Ile Leu Thr Leu Arg Val Pro Arg Ala Gln Ala Val Val Gly Asp Leu
565 570 575

Gly Lys Cys Trp Val Leu Ala Ser His Pro Pro Leu Ala Glu Phe Ser
580 585 590

Leu Thr His Ser Phe Lys Leu Glu Leu His Cys Glu Ala Pro Arg Gly
595 600 605

Ser Pro Pro Ile Leu Tyr Trp Phe Tyr His Glu Asp Val Thr Leu Gly
610 615 620

Ser Asn Leu Phe Ala Leu Ser Ser Phe Leu Pro Ser Ser Ala Pro Ser
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Gly Gly Glu Ala Ser Phe Leu Thr Ala Glu His Ser Gly Cys Glu Ala
645 650 655

Asn Asn Gly Leu Val Ala Gln His Ser Asp Thr Ile Ser Leu Ser Val
660 665 670

Ile Val Pro Val Ser Arg Pro Ile Leu Thr Phe Arg Ala Pro Arg Ala
675 680 685

Gln Ala Val Val Gly Asp Leu Leu Glu Leu His Cys Glu Ala Leu Arg
690 695 700

Gly Ser Ser Pro Ile Leu Tyr Trp Phe Tyr His Glu Asp Val Thr Leu
705 710 715 720

Gly Lys Ile Ser Ala Pro Ser Gly Gly Gly Ala Ser Phe Leu Thr Thr
725 730 735

Glu His Ser Gly Ile Tyr Ser Cys Glu Ala Asp Asn Gly Leu Glu Ala
740 745 750

Gln Arg Ser Glu Met Val Thr Leu Lys Val Ala Val Pro Val Ser Arg
755 760 765

Pro Val Leu Thr Leu Arg Ala Pro Gly Thr His Ala Ala Val Gly Asp
770 775 780

Leu Leu Glu Leu His Cys Glu Ala Leu Arg Gly Ser Pro Leu Ile Leu
785 790 795 800

Tyr Arg Phe Phe His Glu Asp Val Thr Leu Gly Ser Pro Ser Gly Gly
805 810 815

Ala Ser Leu Leu Thr Ala Glu His Ser Gly Cys Glu Ala Asp Asn Gly
820 825 830

Leu Gly Ala Gln Arg Ser Glu Thr Val Thr Leu Tyr Ile Thr Gly Leu
835 840 845

Thr Ala Gly Pro Phe Ala Glu Glu Val Lys Val Ala Ser Thr Pro Val
850 855 860

Ser Gly Ser Leu Phe Leu Ala Ser Ser Ala Pro His Arg
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<211> 843

<212> DNA

<213> HUMAN

<400> 30

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<210> 31

<211> 88

<212> PRT

<213> human

<400> 31

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Val Leu Asp Leu Pro Gln Glu Thr Leu Glu Glu Glu Thr Pro Gly Ala
35 40 45

Asn Leu Trp Pro Thr Thr Ile Thr Phe Leu Thr Leu Phe Leu Leu Ser
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Leu Phe Tyr Ser Thr Ala Leu Thr Val Thr Ser Val Arg Gly Pro Ser
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Gly Asn Arg Glu Gly Pro Gln Tyr
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<210> 32

<211> 101

<212> PRT

<213> human

<400> 32

Met Ala Met Glu Thr Gln Met Ser Gln Asn Val Cys Pro Arg Asn Leu
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Trp Leu Leu Gln Pro Leu Thr Val Leu Leu Leu Leu Ala Ser Ala Asp
20 25 30

Ser Gln Ala Ala Ala Pro Pro Lys Ala Val Leu Lys Leu Glu Pro Pro
35 40 45

Trp Ile Asn Val Leu Gln Glu Asp Ser Val Thr Leu Thr Cys Cys Gly
50 55 60

Ala Arg Ser Pro Glu Ser Pro Ser Ile Gln Trp Phe His His Asn Gly
65 70 75 80

Asn Leu Ile Pro Ile His Thr Gln Ser Ser Tyr Arg Phe Lys Ala Asn

85 90 95

Asn Asn Asp Ser Gly
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<210> 33

<211> 85

<212> PRT

<213> human

<400> 33

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Gly Met Arg Thr Glu Asp Leu Pro Lys Ala Val Val Phe Leu Glu Pro
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Gln Trp Tyr Arg Val Leu Glu Lys Asp Ser Val Thr Leu Lys Cys Cys
35 40 45

Gly Ala Tyr Ser Pro Glu Leu Asn Ser Thr Gln Trp Phe His Asn Glu
50 55 60

Ser Leu Ile Ser Glu Gln Ala Ser Ser Tyr Phe Ile Asp Ala Ala Thr
65 70 75 80

Val Asp Asp Ser Gly
85

<210> 34

<211> 89

<212> PRT

<213> HUMAN

<400> 34

Met Ala Pro Ala Met Glu Ser Pro Thr Leu Leu Cys Val Ala Leu Leu
1 5 10 15

Phe Phe Ala Asp Asp Gly Val Leu Ala Val Pro Gln Lys Pro Lys Val
20 25 30

Ser Leu Asn Pro Pro Trp Asn Arg Ile Phe Lys Gly Glu Asn Val Thr
35 40 45

Leu Thr Cys Asn Gly Asn Asn Phe Phe Glu Val Ser Ser Thr Lys Trp
50 55 60

Phe His Asn Gly Ser Leu Ser Glu Ser Thr Asn Ser Ser Leu Asn Ile
65 70 75 80

Val Asn Ala Lys Phe Glu Asp Ser Gly
85

<210> 35

<211> 81

<212> PRT

<213> human

<400> 35

Met Trp Phe Leu Thr Thr Leu Leu Leu Trp Val Pro Val Asp Gly Gln
1 5 10 15

Val Asp Thr Thr Lys Ala Val Ile Ser Leu Gln Pro Pro Trp Val Ser
20 25 30

Phe Val Gln Glu Glu Thr Val Thr Leu His Cys Glu Val Leu His Leu
35 40 45

Pro Gly Ser Ser Ser Thr Gln Trp Phe Leu Asn Gly Thr Ala Thr Gln
50 55 60

Thr Ser Thr Pro Ser Tyr Arg Ile Thr Ser Ala Ser Val Asn Asp Ser

65 70 75 80

Gly

<210> 36

<211> 81

<212> PRT

<213> human

<400> 36

Met Leu Leu Trp Ala Ser Leu Leu Ala Phe Ala Pro Val Cys Gly Gln
1 5 10 15

Ser Ala Ala Ala His Lys Pro Val Ile Ser Val His Pro Pro Trp Thr
 20 25 30

Thr Phe Phe Lys Gly Glu Arg Val Thr Leu Thr Cys Asn Gly Phe Gln
 35 40 45

Phe Tyr Ala Thr Glu Lys Thr Thr Trp Tyr His Arg His Tyr Trp Gly
 50 55 60

Glu Lys Leu Thr Leu Thr Pro Gly Asn Thr Leu Glu Val Arg Ala Ser
65 70 75 80

Gly

<210> 37

<211> 81

<212> PRT

<213> human

<220>

<221> CHAIN

<222> (58)..(58)

<223> x = any amino acid

<400> 37

Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly Gln
1 5 10 15

Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro Trp Thr
20 25 30

Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys Gly Phe Arg
35 40 45

Phe Tyr Ser Pro Gln Arg Thr Arg Trp Xaa His Arg Tyr Leu Gly Lys
50 55 60

Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu Glu Val Gln Glu Ser
65 70 75 80

Gly

<210> 38

<211> 99

<212> PRT

<213> human

<400> 38

Glu Tyr Thr Cys Gln Thr Gly Gln Thr Ser Leu Ser Asp Pro Val His

1 5 10 15

Leu Thr Val Leu Ser Glu Trp Leu Leu Leu Gln Thr Pro His Leu Glu
20 25 30

Phe Gln Glu Gly Glu Thr Ile Asn Leu Arg Cys His Ser Trp Lys Asp
35 40 45

Lys Pro Leu Val Lys Val Thr Glu Glu Gln Asn Gly Lys Ser Gln Lys
50 55 60

Phe Ser Arg Leu Asp Pro Thr Phe Ser Ile Pro Gln Ala Asn His Ser
65 70 75 80

His Ser Gly Asp Tyr His Cys Thr Gly Asn Cys Gly Tyr Thr Leu Phe
85 90 95

Ser Ser Lys

<210> 39

<211> 99

<212> PRT

<213> human

<400> 39

Glu Tyr Arg Cys Gln Thr Asn Leu Ser Thr Leu Ser Asp Pro Val Gln
1 5 10 15

Leu Glu Val His Ile Gly Trp Leu Leu Leu Gln Ala Pro Arg Trp Val
20 25 30

Phe Lys Glu Glu Asp Pro Ile His Leu Arg Cys His Ser Trp Lys Asn
35 40 45

Thr Ala Leu His Lys Val Thr Tyr Leu Gln Asn Gly Lys Gly Arg Lys
50 55 60

Tyr Phe His His Asn Ser Asp Phe Tyr Ile Pro Gln Ala Thr Leu Lys

65 70 75 80

Asp Ser Gly Ser Tyr Phe Cys Arg Gly Leu Phe Gly Ser Lys Asn Val
 85 90 95

Ser Ser Glu

<210> 40

<211> 99

<212> PRT

<213> human

<220>

<221> CHAIN

<222> (16)..(16)

<223> x = any amino acid

<400> 40

Glu Tyr Lys Cys Gln His Gln Gln Val Asn Glu Ser Glu Pro Val Xaa
1 5 10 15

Leu Glu Val Phe Ser Asp Trp Leu Leu Leu Gln Ala Ser Ala Glu Val
 20 25 30

Val Met Glu Gly Gln Pro Leu Phe Leu Arg Cys His Gly Trp Arg Asn
 35 40 45

Trp Pro Val Tyr Lys Val Ile Tyr Tyr Lys Asp Gly Glu Ala Leu Lys
 50 55 60

Tyr Trp Tyr Glu Asn His Asn Ile Ser Ile Thr Asn Ala Thr Val Glu

65 70 75 80

Asp Ser Gly Thr Tyr Tyr Cys Thr Gly Lys Val Trp Gln Leu Asp Tyr
 85 90 95

Glu Ser Glu

<210> 41

<211> 99

<212> PRT

<213> human

<400> 41

Glu Tyr Arg Cys Gln Arg Gly Leu Ser Gly Arg Ser Asp Pro Thr Trp
1 5 10 15

Leu Glu Thr His Arg Gly Trp Leu Leu Leu Gln Tyr Ser Ser Arg Val
 20 25 30

Phe Thr Glu Gly Glu Pro Leu Ala Leu Arg Cys His Ala Trp Lys Asp
 35 40 45

Lys Leu Val Tyr Asn Val Leu Tyr Tyr Arg Asn Gly Lys Ala Phe Lys
 50 55 60

Phe Phe His Trp Asn Ser Asn Leu Ile Ile Leu Lys Ile Asn Ile Ser
65 70 75 80

Ser His Asn Gly Thr Tyr His Cys Ser Gly Asn Gly Lys His Arg Tyr
 85 90 95

Thr Ser Ala

<210> 42

<211> 99

<212> PRT

<213> human

<400> 42

Leu Tyr Arg Cys Gln Ala Arg Gly Ser Pro Arg Ser Asn Pro Val Arg
1 5 10 15

Leu Leu Phe Ser Ser Asp Ser Leu Ile Leu Gln Ala Pro Tyr Ser Val
 20 25 30

Phe Glu Gly Asp Thr Leu Val Leu Arg Cys His Arg Arg Arg Lys Glu
 35 40 45

Lys Leu Thr Ala Val Lys Tyr Thr Trp Asn Gly Asn Ile Leu Ser Ile
 50 55 60

Ser Asn Lys Ser Trp Asp Leu Leu Ile Pro Gln Ala Ser Ser Asn Asn
65 70 75 80

Asn Gly Asn Tyr Arg Cys Ile Gly Tyr Gly Val Glu Asn Asp Val Phe
 85 90 95

Arg Ser Asn

<210> 43

<211> 98

<212> PRT

<213> human

<400> 43

Glu Tyr Arg Cys Gln Ala Gln Gly Ser Pro Leu Ser Ser Pro Val His
1 5 10 15

Leu Asp Phe Ser Ser Ala Ser Leu Ile Leu Gln Ala Pro Leu Ser Val

20 25 30
 Phe Glu Gly Asp Ser Val Val Leu Arg Cys Arg Ala Lys Ala Glu Val
 35 40 45
 Thr Leu Asn Asn Thr Ile Tyr Lys Asn Asp Asn Val Leu Ala Phe Leu
 50 55 60
 Asn Lys Lys Thr Asp Phe His Ile Pro His Ala Cys Leu Lys Asp Asn
 65 70 75 80
 Gly Ala Tyr Arg Cys Thr Gly Tyr Lys Glu Ser Cys Cys Pro Val Ser
 85 90 95

Ser Asn

<210> 44

<211> 97

<212> PRT

<213> human

<400> 44

Gly Lys His Arg Tyr Thr Ser Ala Gly Ile Ser Val Thr Val Lys Glu
 1 5 10 15
 Leu Phe Pro Ala Pro Val Leu Asn Ala Ser Val Thr Ser Pro Leu Leu
 20 25 30
 Glu Gly Asn Leu Val Thr Leu Ser Cys Glu Thr Lys Leu Leu Leu Gln
 35 40 45
 Arg Pro Gly Leu Gln Leu Tyr Phe Ser Phe Tyr Met Gly Ser Leu Thr
 50 55 60
 Leu Arg Gly Arg Asn Thr Ser Ser Glu Tyr Gln Ile Leu Thr Ala Arg
 65 70 75 80
 Arg Glu Asp Ser Gly Leu Tyr Trp Cys Glu Ala Ala Thr Glu Asp Gly

85 90 95

Asn

<210> 45

<211> 99

<212> PRT

<213> human

<400> 45

Gly Asp Glu Asn Asp Val Phe Arg Ser Asn Phe Lys Ile Ile Lys Ile
1 5 10 15

Gln Glu Leu Phe Pro His Pro Glu Leu Lys Ala Thr Asp Ser Gln Pro
20 25 30

Thr Glu Gly Asn Ser Val Asn Leu Ser Cys Glu Thr Gln Leu Pro Pro
35 40 45

Glu Arg Ser Asp Thr Pro Leu His Phe Asn Phe Phe Arg Asp Gly Glu
50 55 60

Val Ile Leu Ser Asp Trp Ser Thr Tyr Pro Glu Leu Gln Leu Pro Thr
65 70 75 80

Val Trp Arg Glu Asn Ser Gly Ser Tyr Trp Cys Gly Ala Glu Thr Val
85 90 95

Arg Gly Asn

<210> 46

<211> 99

<212> PRT

<213> human

<400> 46

Lys Glu Ser Cys Cys Pro Val Ser Ser Asn Thr Val Lys Ile Gln Val
1 5 10 15

Gln Glu Pro Phe Thr Arg Pro Val Leu Arg Ala Ser Ser Phe Gln Pro
20 25 30

Thr Ser Gly Asn Pro Val Thr Leu Thr Cys Glu Thr Gln Leu Ser Leu
35 40 45

Glu Arg Ser Asp Val Pro Leu Arg Phe Arg Phe Phe Arg Asp Asp Gln
50 55 60

Thr Leu Gly Leu Gly Trp Ser Leu Ser Pro Asn Phe Gln Ile Thr Ala
65 70 75 80

Met Trp Ser Lys Asp Ser Gly Phe Tyr Trp Cys Lys Ala Ala Thr Met
85 90 95

Pro His Ser

<210> 47

<211> 101

<212> PRT

<213> human

<400> 47

Val Leu Lys Arg Ser Pro Glu Leu Glu Leu Gln Val Leu Gly Leu Gln
1 5 10 15

Leu Pro Thr Pro Val Val Trp Phe His Val Leu Gly Tyr Leu Ala Val
20 25 30

Gly Ile Met Phe Leu Val Asn Thr Val Leu Trp Val Val Thr Ile Arg
35 40 45

Lys Glu Leu Lys Arg Lys Lys Lys Trp Asp Leu Glu Ile Ser Leu Asp
50 55 60

Ser Gly His Glu Lys Lys Val Thr Ser Ser Leu Gln Glu Asp Arg His
65 70 75 80

Glu Glu Glu Glu Leu Lys Cys Gln Glu Gln Lys Gly Glu Gln Leu Gln
85 90 95

Glu Gly Val His Arg
100

<210> 48

<211> 97

<212> PRT

<213> human

<220>

<221> CHAIN

<222> (53)..(53)

<223> x = any amino acid

<400> 48

Ile His Lys His Ser Pro Ser Leu Gln Ile His Val Gln Arg Ile Pro
1 5 10 15

Val Ser Gly Val Leu Leu Glu Thr Gln Pro Ser Gly Gly Gln Ala Val
20 25 30

Glu Gln Glu Met Leu Val Leu Val Cys Ser Val Ala Glu Gly Thr Gly
35 40 45

Asp Thr Thr Phe Xaa Trp His Arg Glu Asp Met Gln Glu Ser Leu Gly
50 55 60

Arg Lys Thr Gln Arg Ser Leu Arg Ala Glu Leu Glu Leu Pro Ala Ile
65 70 75 80

Arg Gln Ser His Ala Gly Gly Tyr Tyr Cys Thr Ala Asp Asn Ser Tyr
85 90 95

Gly

<210> 49

<211> 94

<212> PRT

<213> human

<400> 49

Val Ile Ser Asp Ser Pro Arg Ser Trp Ile Gln Val Gln Ile Pro Ala
1 5 10 15

Ser His Val Leu Thr Leu Ser Pro Glu Lys Ala Leu Asn Phe Glu Gly
20 25 30

Thr Lys Val Thr Leu His Cys Glu Thr Gln Glu Pro Ser Leu Arg Thr
35 40 45

Leu Tyr Arg Phe Tyr His Glu Gly Val Pro Leu Arg His Lys Ser Val
50 55 60

Arg Cys Glu Arg Gly Ala Ser Ile Ser Phe Ser Leu Thr Thr Phe Asn
65 70 75 80

Ser Gly Asn Tyr Tyr Cys Ile Ala Asp Asn Gly Leu Gly Ala
85 90

<210> 50

<211> 26

<212> PRT

<213> human

<220>

<221> CHAIN

<222> (2)..(8)

<223> x = any amino acids

<220>

<221> CHAIN

<222> (10)..(11)

<223> x = any amino acids

<220>

<221> CHAIN

<222> (13)..(14)

<223> x = any amino acids

<220>

<221> CHAIN

<222> (16)..(22)

<223> x = any amino acids

<220>

<221> CHAIN

<222> (24)..(25)

<223> x = any amino acids

<400> 50

Asp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asp Xaa Xaa Tyr Xaa Xaa Leu Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Tyr Xaa Xaa Leu
20 25

<210> 51

<211> 63

<212> PRT

<213> human

<400> 51

Glu Ser Ser His Ser Ile Cys Pro Ala Gln Val Glu Leu Gln Ser Leu
1 5 10 15

Tyr Val Asp Val His Pro Lys Lys Gly Asp Leu Val Tyr Ser Glu Ile
20 25 30

Gln Thr Thr Thr Leu Gly Glu Glu Glu Glu Ala Asn Thr Ser Arg
35 40 45

Thr Leu Leu Glu Asp Lys Asp Val Ser Val Val Tyr Ser Glu Val
50 55 60

<210> 52

<211> 39

<212> PRT

<213> human

<400> 52

Asp Asn Lys Glu Pro Leu Asn Ser Asp Val Gln Tyr Thr Glu Val Gln
1 5 10 15

Val Ser Ser Ala Glu Trp Ser His Lys Asp Leu Gly Lys Lys Asp Thr
20 25 30

Glu Thr Val Tyr Ser Glu Val
35

<210> 53

<211> 45

<212> PRT

<213> human

<220>

<221> CHAIN

<222> (38)..(38)

<223> x = any amino acid

<400> 53

Asp Ser Asp Ser Gln Glu Pro Thr Tyr His Asn Val Pro Ala Trp Glu
1 5 10 15

Glu Leu Gln Pro Val Tyr Thr Asn Ala Asn Pro Arg Gly Glu Asn Val
20 25 30

Val Tyr Ser Glu Val Xaa Ile Ile Tyr Ser Glu Val Lys
35 40 45

<210> 54

<211> 44

<212> PRT

<213> human

<400> 54

Ala Ser Asp Gln Arg Asp Leu Thr Glu His Lys Pro Ser Val Ser Asn
1 5 10 15

His Thr Gln Asp His Ser Asn Asp Pro Pro Asn Lys Met Asn Glu Val
20 25 30

Thr Tyr Ser Thr Leu Ile Ile Tyr Ser Glu Val Lys
35 40

<210> 55

<211> 24

<212> PRT

<213> human

<220>

<221> CHAIN

<222> (2)..(2)

<223> x = any amino acid

<220>

<221> CHAIN

<222> (4)..(5)

<223> x = any amino acid

<220>

<221> CHAIN

<222> (8)..(8)

<223> x = any amino acid

<220>

<221> CHAIN

<222> (10)..(11)

<223> x = any amino acid

<220>

<221> CHAIN

<222> (14)..(14)

<223> x = any amino acid

<220>

<221> CHAIN

<222> (16)..(17)

<223> x = any amino acid

<220>

<221> CHAIN

<222> (20)..(20)

<223> x = any amino acid

<220>

<221> CHAIN

<222> (22)..(23)

<223> x = any amino acid

<400> 55

Ser Xaa Tyr Xaa Xaa Leu Ser Xaa Tyr Xaa Xaa Leu Ser Xaa Tyr Xaa
1 5 10 15

Xaa Leu Ser Xaa Tyr Xaa Xaa Leu
20